

ESTABLISHED IN
1861

THE AMERICAN

OLDEST BEE-PAPER
IN AMERICA

BEE JOURNAL

GEORGE W. YORK, | DEVOTED EXCLUSIVELY—
Editor. — TO BEE-CULTURE. | Weekly, \$1.00 a Year.
Sample Free.

VOL. XXXII. CHICAGO, ILL., OCT. 12, 1893.

NO. 15.



It Grew by the wayside where travelers trod,
On hillsides and pastures, tho' barren the sod.
Neglected, despised, a poor, yellow weed.
That gave to the care of the wild wind its seed.

The bees learned its secret, the wind told the tale,
As he hurried along over meadow and dale;
For the sweet perfume lingered where'er passed his feet.
Of the kisses he stole from the Golden-Rod sweet.—Selected.

Next Week we no doubt shall be able to tell you a little about the convention of bee-keepers now being held in Chicago—if you were not there to see for yourself. We hope to be able to report the biggest and best convention in the 25 years of the North American's history.

Mr. R. C. Aikin, of Colorado, called on us last week. He came ahead of the convention so as to be on hand when the "show" begins. He brought along a large number of samples of various kinds of honey to exhibit to the members of the North American this week. Mr. A. is a splendid and thoroughly practical writer on bee-topics. He won't be lonesome at the convention.

Mrs. Frank Benton called at our office a few days ago. She is a very pleasant and entertaining sister. She said that the whole Benton family expected to attend the convention. Ralph will be on hand, but likely not with his bicycle. All will remember that we had a picture of the young man on his bicycle, in the BEE JOURNAL a few months ago. His mother says he has one colony of bees that he takes entire charge of. He should be called on at the convention to give his "experience" with bees, both in Europe and America. He might tell it in his two "mother tongues" that were spoken of in his biographical sketch.

The North American Convention will be in session before our readers receive this number of the BEE JOURNAL. We hope to meet and greet many of our friends during this week, between the meetings. We have been looking forward with intense interest to this time, and trust that everything may be delightfully harmonious and thoroughly enjoyable. We have done all we could to assure a successful gathering, and now anticipate a glorious time, at "the gathering of the clan."

Mrs. Sallie E. Sherman, of Salado, Tex., has recently been appointed Vice-President of the Woman's Congress of Texas. Mrs. S. is one of the most prominent lady bee-keepers of that State, and wrote a few days ago that she hoped to meet the members of "our fraternity" this week at the North American convention. We have the picture and biographical sketch of Sister Sherman, which will appear soon in these columns.

Mr. Geo. T. Gunn, of Iowa, is a great deal safer than his back name would indicate. He favored us with a pleasant call a few days ago. He is one of the younger bee-keepers, but keeps his eyes open for aparian "game." Last winter two of his colonies became queenless in the cellar and went into other hives. One colony was in a hive directly above another, and there being a crack in the cover of the lower hive, the bees from above all went down and united with the bees below. In the other case, the two hives were side by side, and the one colony went out of its hive-entrance and into the entrance of the other hive. Mr. Gunn knew the two colonies had thus united, as two hives were entirely empty of bees, and the other two colonies were just double the strength in bees, of any of the others in the cellar.

Mr. H. B. Sisson, of Ottumwa, Iowa, died on Aug. 16, 1893, after only a few hours' illness. He would have been 71 years old had he lived until Aug. 26th. He had been a bee-keeper for 25 years, 15 years of which he run his apiary in connection with dentistry, and the last 10 years of his life he gave his entire time to bee-keeping, as his health failed so that he had to get outdoors, away from his office work. Mr. Sisson had been a careful reader, as well as correspondent, of the AMERICAN BEE JOURNAL for years. Thus we are again reminded that Death still calls, and enforces his demands.

Mr. J. F. McIntyre, of California, has sent us a photograph of his 8-comb honey-extractor, which reverses while in full motion. The picture was taken after it had extracted 44,000 pounds of honey without injury to the combs or machine. It is a regular "Jumbo." Few bee-keepers in this "neck of the woods" would have any use for so large a machine; but in California, where they do big things on a big scale, it is just what they want.

The Aparian Exhibit, in the southeast corner of the gallery of the Agricultural Building, will likely be visited by the convention in a body, this week, and no doubt they will be able to "help" Judge Secor in making the proper awards.

Old Bees Do Not Locate their hive when swarming, says Bro. Hutchinson editorially in the *Review*. He says that this season "he was practicing the Heddon method of preventing swarming, that of leaving the old hive by the side of the swarm for seven or eight days, and then moving it away, but neglected to move one hive until the ninth day in the afternoon. Within half an hour after the removal a second swarm issued. The queen did not go with the bees; probably she was too young to fly. According to the rules, the bees should have returned to the hives from which they issued. About one-third of them (probably those that had never before left the hive) returned to the hive from which they had swarmed, and the rest of them went back to the old location and joined the swarm that was hived nine days before on the old stand."

Mr. E. France's Report, from Platteville, Wis., for the season of 1893, in *Gleanings* for Oct. 1st, shows a total of a trifle less than 40,000 pounds of extracted honey taken from a spring count of 323 colonies. The bees were in seven different yards. The honey was secured between June 19th and July 20th, and 1,400 pounds was extracted in two hours, with a two-frame, non-reversible machine.

The Illinois Dairy Exhibit is an elegant little 32-page pamphlet "souvenir" issued by the Executive Committee of the Illinois Dairyman's Association. It is printed on enameled paper, and beautifully illustrated. It shows that the total annual value of the dairy products of Illinois is over \$75,000,000. W. R. Hostetter, of Mt. Carroll, Ills., is the Secretary.

Exhibits of Honey at Fairs.—A short time ago, we received the following comment on the discussion in the BEE JOURNAL regarding the New York honey exhibit. It is so "to the point," that it will serve very nicely as a further "final reference" to that subject. It was simply signed "Far West," and though our rule is not to publish any anonymous contributions, this one is so unique and interesting that for once we lay aside the "rule" and allow it to pass in. As it is evidently written with the kindest of motives, and feeling of sympathy, it will be all the more ac-

ceptable. Here is what Mr., Mrs. or Miss Far West has to say about the matter :

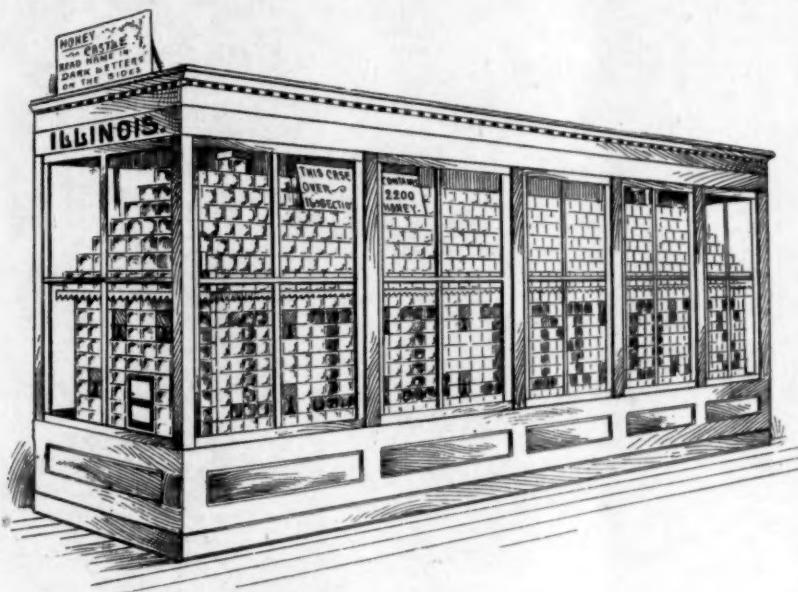
MR. EDITOR :—Isn't it a little strange that so little progress is made in the East, and that they still cling to the ways of thinking that were fashionable when our grandfathers were boys ? It is necessary to travel West in order to see things clearly. There's that man Hershiser, a well-meaning sort of person, no doubt, but Dr. Mason is having a hard time to get him to see that when a case of honey is seen at a Fair, the whole of the honey in the case is not on exhibition, but only that which is in sight. But then Hershiser has lived in New York all his life.

When I lived in that State, I took to a

should say was on exhibition, so I showed him what I had, and asked him how I should enter it—how much honey I should enter. "Why, my dear sir, said he, "you have no honey on exhibition. You see, we only count what can be seen as on exhibition. No matter how much honey may be in the case, no one sees anything but the surface, and that's just the cappings, so the proper way to enter your exhibit will be to enter so much white wax. Of course I could see it plainly enough, as soon as my attention was called to it.

And yet there is that wrangle over an exhibit of white beeswax at the World's Fair, disputing as to the amount of honey, when there is no honey on exhibition at all.

FAR WEST.



No. 1.—The Illinois State Honey Exhibit at the World's Fair.

Fair a case containing one-pound sections. It was credited to me as a display of 24 pounds of comb honey, just as it would be credited if I lived there to-day. When I moved to Ohio, I entered at a Fair a similar case, as 24 pounds of comb honey. I was politely informed that I had only 6 pounds of honey on exhibition, as only 6 sections could be seen through the glass of the case, and the other sections not being in sight could not be considered on exhibition.

After moving farther West, I tried the same thing, but learned that as only one side of each section could be seen, it could only be said that 3 lbs. were on exhibition.

Last year I moved still farther West, to the place where I now live. I took a 24-pound case of honey to the Fair, but didn't feel exactly certain how much honey I

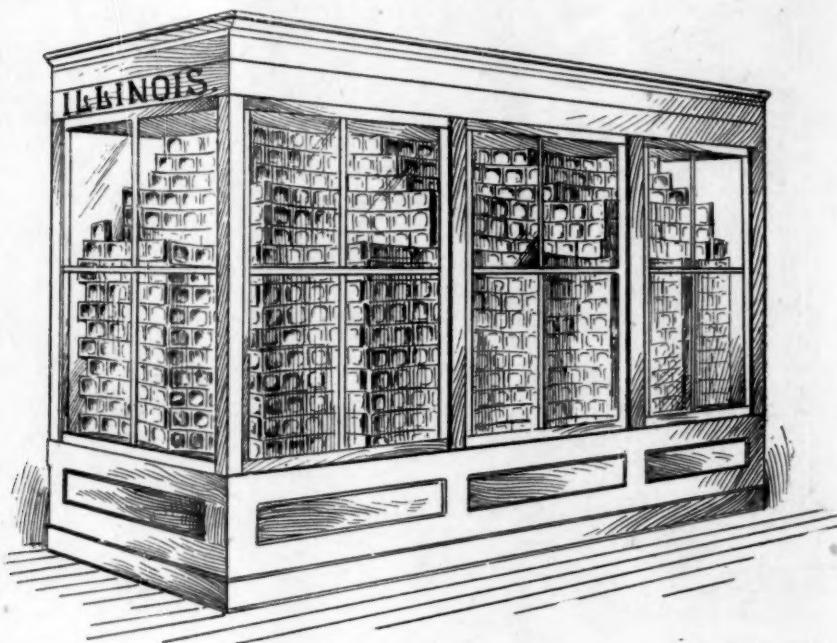
The Illinois Honey Exhibit at the World's Fair is a very great attraction. Bros. J. M. Hamaugh and Jas. A. Stone are entitled to much credit for the fine display that they have installed for the beekeepers of the State of Illinois. Considering the exceedingly limited time in which they had to complete the exhibit, it is indeed a remarkable showing of the industry in this State.

In order that the description of the illustrations of the exhibits may be better understood, we number them as follows :

No. 1.—The first show-case you approach from the north has the "Honey Castle,"

which contains over 2,200 pounds of comb honey, with a placard in front stating these facts. There is sufficient dark honey in sections on the sides so that by their arrangement spells the word "ILLINOIS." A placard is posted in two different places worded thus: "Read name in dark honey." This castle was designed by Bro. Hambaugh, with the exception of the lettering on the sides which was put in by the suggestion of Bro. Stone. This piece of work nearly fills the entire case, which is about

little honey-bee, under the guidance of Mr. Aaron Coppen, of Wenona, Ills. It is the familiar inscription found on our coins—"In God We Trust." Mr. Coppen also sends his autograph, put up in the same way, viz: "A. Coppen, Wenona, Ills.; but Mr. Coppen failed to send an exhibit of honey, owing to the prevalence of honeydew in his locality, and he apologizes for the dark appearance of his mottoes, though they were considered very worthy of exhibition, and were installed.



No. 2.—The Illinois State Honey Exhibit at the World's Fair.

25 feet in length, by 8 feet high and 5 feet broad.

No. 2.—Standing next to No. 1 on the south, is the competitive exhibits of virgin white clover honey, from various parties, chief among which are Dr. C. C. Miller, W. C. Lyman, L. Highbarger, E. Whittlesey, Jas. A. Stone, Geo. F. Robbins, Geo. Pindexter, G. D. Rogers and others. This case is 15 feet in length, and filled to the top in fantastic shapes. A placard on the sides reads thus: "All Illinois honey, this year's crop." A piece of work adorns the front of the case, that was made by the ingenious

No. 3.—This case is called the "Puzzle Case," and is composed entirely of extracted honey put up in a multitude of forms, mounted in pyramid shape, and, to all appearances, counter pyramid form. It is a puzzler to the unsuspecting gazer. In this case will be seen the ingenious device worked out by the bees according to Bro. Pindexter's idea, entitled "Sweet Home." This is a complete cabin of honey, including door, window, old-fashioned chimney, etc. Installed near it is "Soldiers in Camp." This is a production of tenting grounds with honey, and soldiers standing as senti-

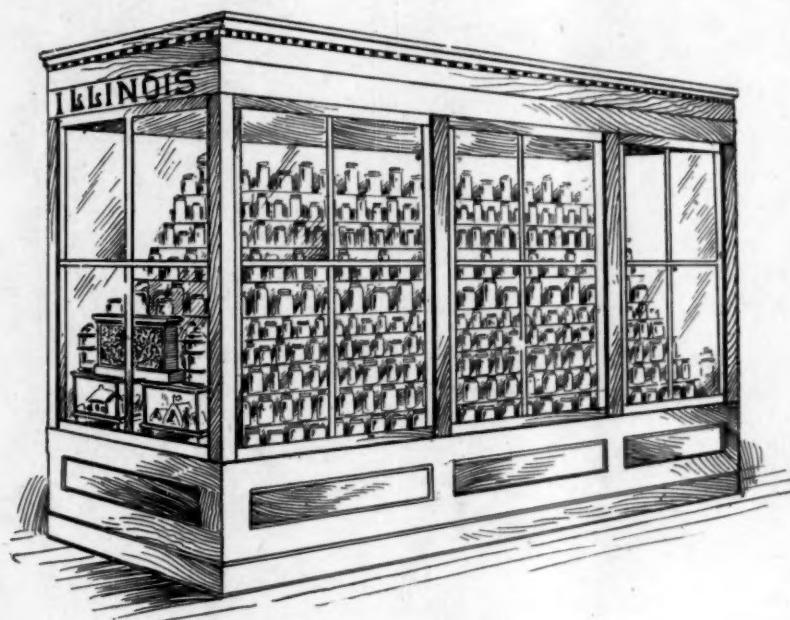
nels. It is very unique, and shows what can be done with the "busy bee." Surmounting these designs is an observatory hive of real, live bees, but it must be understood that they are not storing honey. A placard may be seen in front of the case, directing the observer to "See Above," and thus behold the pyramid of honey as seen in the mirror ceiling.

No. 4.—The next, and last, case on the south side is largely composed of the wax exhibit, chief among which is that of the

teresting wax work. In quantity and variety of designs, this wax exhibit perhaps exceeds that of any other State.

There is also in the Illinois exhibit various forms of confectionery, made with honey in place of sugar.

Above the show-cases is a large sign, perhaps 25 by 3 feet in size, upon which is painted, "ILLINOIS HONEY EXHIBIT." It can easily be read from the center of the Agricultural Building, several hundred feet distant.



No. 3.—*The Illinois State Honey Exhibit at the World's Fair.*

comb foundation and wax exhibit of Chas. Dadant & Son, of Hamilton, Ills. Bros. Dadant have furnished a very interesting piece of work, and it never fails to catch the eye of the passer-by. It is a two-story dwelling-house, finely finished, and elaborately colored in various shades of wax. The lettering along the roof reads, "Illinois Beeswax." Above, and surmounting all, is seen in wax and honey, the words "World's Fair." This case is one of the most attractive in the whole exhibit. Mr. Geo. F. Robbins also contributed some in-

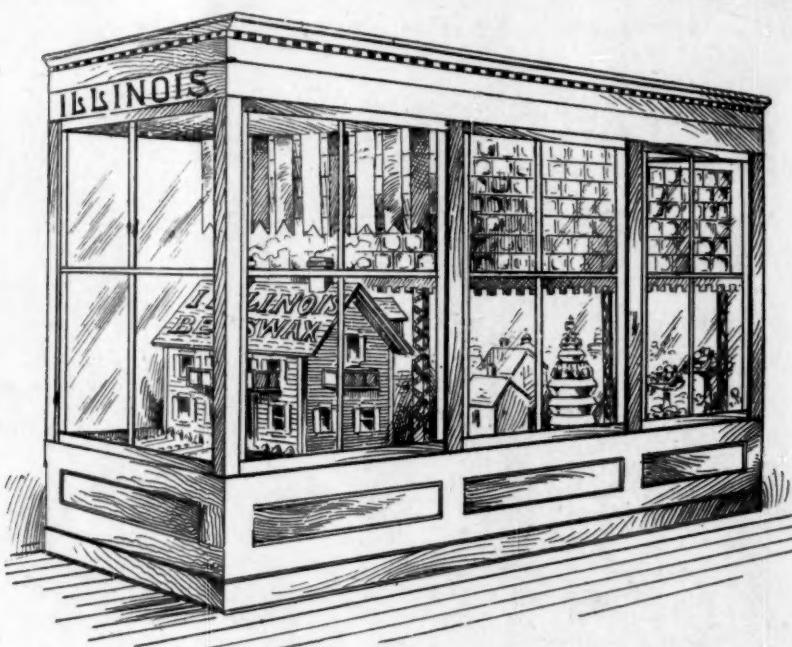
Our quartette of illustrations of the Illinois honey exhibit are singularly correct (with the exceptions of a few designs added since the artist made the sketches), as may be attested by those who have been so fortunate as to see the exhibits themselves. Hence those who may not be able to visit the Fair will now know just how the honey and wax exhibits of Illinois really appeared. We hope to soon follow these pictures and descriptions with those of other States that we have, as yet, not presented in the BEE JOURNAL columns. It is a nice way to pre-

serve, in permanent form, the beauties of the principal attraction in the great Agricultural building at the World's Fair.

Doubtless the members of the North American convention, in a body, will be inspecting the aparian exhibits while those of our readers who have been compelled to remain at home are reading this number of the BEE JOURNAL.

try, is favored by natural conditions. The agricultural societies have appointed persons to give advice and assistance concerning the care of bees, improved construction of bee-hives, etc. In consequence of climatic conditions, the keeping of bees is confined to the southern half of the kingdom, but occurs exceptionally as far north as Lulea.

The number of colonies in the entire



No. 4.—*The Illinois State Honey Exhibit at the World's Fair.*

Bee-Keeping in Sweden.—The keeping of bees was in olden times very common in Sweden, but became less and less general as the mead, for which the honey was used, was more and more replaced by other beverages, and sugar became cheap and easily obtainable.

Bee-keeping, however, if properly managed, fully repays the labor expended upon it in Sweden, without taking into account the role that bees, as well as many other insects, play in the fertilization of plants. Private individuals, as well as the agricultural societies, recognizing this fact, have lately tried to excite interest in this occupation, which, in many parts of that coun-

kingdom of Sweden may be reckoned as about 100,000. As regards the production, there are no statistics. During the years 1886 to 1890, about 14,000 kilog (30,000 pounds) of honey were annually imported; the export of wax being somewhat larger than the import.

One-Cent Postage Stamps we prefer whenever it is necessary to send stamps for fractions of a dollar. By remembering this, you will greatly oblige us, as we use many more one-cent stamps than the two-cent kind.

Great Premiums on page 453!

Biographical

NO. 51.—JOHN M. HOOKER.

Among the more prominent bee-keepers in Great Britain is our subject this week. We had the very great pleasure of meeting Mr. Hooker a short time



JOHN M. HOOKER.

ago, when he was at the World's Fair. He also went to Canada, and visited as many bee-keepers on this side the Atlantic as he was able to reach. He expected to leave for his home in London, England, on Oct. 1st, and doubtless ere this he has safely arrived there, after his round-trip journey of over 8,000 miles.

Several years ago there appeared in the *British Bee Journal* an excellent

biographical of Mr. Hooker, the principal portion of which we take pleasure in reproducing for the benefit of our readers, making such changes therein as shall correctly bring it down to date. The following, then, we feel will be read with no little interest, as the distinguished services which Mr. Hooker has rendered the cause of bee-culture in his own land, place him in the very front rank of English apiarists:

John Marshall Hooker was born at Brenchley, in the county of Kent, on April 26, 1829. He was the youngest son of Stephen Hooker, Esq., late of Broad Oak in that parish, who inherited, and died possessed of, considerable landed property in the counties of Kent and Sussex, which, by his will, he directed to be sold and divided among his wife and nine children then living.

At the age of 7 years, John M. was sent to a school well known in Kent—“Tudor Hall,” Hawkhurst; when he was 12 years old he was removed to Great Ealing School in Middlesex, at that time kept by Dr. Frank Nichols, where he remained until he was between 17 and 18 years old. On leaving school he was articled to Wm. Caveler, Esq., an architect well known in the profession by the works he published on Gothic Architecture. After this he was for a time in the office of George Smith, Esq., the architect and surveyor to the Mercers’ Company. On leaving Mr. Smith, he commenced on his own account, and has ever since carried on his profession of an architect. Mr. Hooker has built several churches, and restored others; he has built a number of parsonage-houses, schools and mansions; has laid out the roads and partly covered several estates with houses of a superior class.

Having been brought up in one of the prettiest rural districts, Mr. Hooker, at an early age, took great interest and pleasure in all the resources of a country life, and occupied his spare time in shooting, hunting, bee-keeping, and farming. His father, who was a very clever and scientific man, was an advanced bee-keeper, and during the summer holidays his son assisted him in his apiary, and accompanied him in his drives over to the apiary of Mr. Golding, of Hunton, in Kent, only a few miles distant; listened to the bee-talk, and witnessed the manipulation of the bees, which were kept in Huber and Grecian hives.

Mr. Golding was the author of a book

on bee-keeping, called "Golding's Shilling Bee-Book," and invented an improved form of Grecian hive, having movable bars, so that with a little management the surplus could be taken. These hives, which were not large, are storified three and four high, and were used by Mr. Hooker, who obtained large quantities of honey of a superior quality in the upper hives.

Upon the introduction of frames, Mr. John M. Hooker was amongst the earliest of those who adopted them, and his Grecian hives were given up.

At the beginning of the Volunteer movement, Mr. John M. Hooker took great interest in the same, and with his friend, George Tomkin, Esq., of Yalding, raised a corps in four or five adjoining villages, of which he was appointed Captain, his friend being Lieutenant. He was a good rifle-shot, and having a range of 400 yards on his own property, he was, without trouble, able to practice when he felt inclined. He won several prizes, and, among others, the cup given by the men of the battalion for competition among their officers.

In 1861 he was married; some time after he left Brenchley, and gave up the command of the corps, the 42nd Kent.

In 1874 Mr. Hooker became acquainted with Mr. C. N. Abbott and Mr. Frank Cheshire, and attended a meeting with those gentlemen (called by Mr. Abbott in the *British Bee Journal*) at Camden Town, for the purpose of revising a schedule of prizes for the first Crystal Palace Exhibition, and to consider the best means of forming a National Association.

On this occasion the Hon. and Rev. H. Bligh took the chair, and on his being obliged to leave, Mr. Hooker was called to the chair to finish the business, and was one of the committee then chosen, who afterwards carried out that memorable Show. At the general meeting of bee-keepers then present at the Crystal Palace, Mr. Hooker was chosen one of the members of the committee of the British Bee-Keepers' Association, which had then been formed.

From that time, 1874 up to 1889, Mr. Hooker had been one of the acting members of the committee of the association, being re-elected annually. In 1889, although asked by different members of the old committee, he declined to allow himself to be nominated for re-election. From that time up to the present, Mr. J. M. Hooker has been an *ex-officio* member of the British Bee-Keepers' Association, representing the county of Kent at the meetings.

At the second Crystal Palace Show in 1875, in Class 2, for the best movable comb hive for depriving purposes, the second prize and bronze medal were awarded to Mr. Hooker. In speaking of this class, the editor of the *Bee Journal* (Mr. Abbott) says: "We must, however, give credit where it is due. We may here remark that our first notion of a movable dummy, *the greatest improvement until now introduced into frame hives*, came from Mr. Hooker." In Class 4, for the best hive on the collateral principle, the first prize and silver medal were awarded to Mr. Hooker.

At the third show of the association held, at the Alexandra Palace, in 1876, Mr. Hooker was awarded a bronze medal in Class 2, a bronze medal in Class 3 for the best hive on the storifying principle, and the silver medal for the best collateral hive. In the editorial giving an account of this show is the following remark: "In all Mr. Hooker's hives the $5/24$ inch *perforated zinc* plays an important part, as by its use the entrance of the queen and drones to the honey-comb in the super is prevented." Since that time the use of excluder zinc has become very much used both in England and America.

Mr. Hooker exhibited a super at the Royal Show at Windsor, in 1889, weighing 75 pounds net, which was filled by June 14th, through the Raynor pattern of *perforated zinc*. Surely this is tolerably conclusive evidence that it does not much interfere with the bees' working; there was no other super of nearly the same weight taken from one hive in the exhibition.

At the show at South Kensington in 1878, a bronze medal was awarded Mr. Hooker in the class for the best movable-comb hive.

At the great show at Kilburn in 1879, Mr. Hooker obtained a bronze medal for his Alexandra hive, and the same year at the exhibition at South Kensington, the silver medal for the same hive.

In 1880, at the South Kensington show, Mr. Hooker obtained a bronze medal for his hive, and another for his super.

In 1883, the first prize was awarded him for the best movable-comb hive.

Mr. Hooker was one of the judges at the Royal Agricultural Society's exhibition at Reading, in 1882; York, 1883; Shrewsbury, 1884; Preston, 1885; Norwich, 1886; and Newcastle, 1887; also at several of the Bath and West of England and Royal Counties Shows. In the Bligh Competition of 1882-83, he obtained the first prize for largest

quantity of honey, etc., from one colony. Mr. Hooker's uncapping machine is very ingenious; it will be found of great service in facilitating the work of preparing combs for the extractor.

In 1888, he published a small book called Hooker's "Guide to Successful Bee-Keeping." He has also obtained several prizes and medals for comb and extracted honey at various shows.

Since he removed from Seven Oaks to Lewisham, although in the same county (Kent), the proximity to London has prevented his continuing bee-keeping to the same extent.

GENERAL QUESTIONS.

In this department will be answered those questions needing IMMEDIATE attention, and such as are not of sufficient special interest to require replies from the 20 or more apiarists who help to make "Queries and Replies" so interesting on another page. In the main, it will contain questions and answers upon matters that particularly interest beginners.—ED.

Untested Queens Asked About.

I have a question to ask about untested queens. A queen-breeder advertises Italian queens, and a bee-keeper orders one dozen of the untested Italian queens by return mail; when they arrive they are examined and found to be hybrids and blacks. Is that just?

H. W. McCOMBS.
Richmond, Iowa.

ANSWER.—An untested queen is one reared from an Italian mother, without knowing how she has mated. If she has mated with a pure Italian drone she will produce three-banded workers. If she has mated with a black drone, part of her workers will look like pure Italians and part will look like pure blacks.

You say that when the queens arrived they were found to be hybrids and blacks. There probably was nothing to judge from except the appearance of the queens. Few bee-keepers of experience would like to give a positive judgment as to the purity of a queen with nothing but the looks of a queen to judge from. Some are very dark, some are very light, and some are striped yellow and black.

The only question to be determined in the case is whether the queens sent were the progeny of a pure Italian queen. It will be seen that you must depend largely on the honesty of the man sending them out.

Purposes for Which Honey is Used.

I would like to see a statement showing for what purposes honey is used, and the portions used for different purposes. My curiosity is great to know where the barrels of honey go. L. M. BROWN.

Glen Ellen, Iowa.

Knowing the very extensive experience that Bro. Chas. F. Muth has had in selling honey for manufacturing purposes, we referred the above question to him for reply, and he has kindly given this interesting answer:

In replying to the questions of Mr. Brown, I shall endeavor to answer as fully as possible.

The proportions of honey used for different manufactures seems to be the business secret with each manufacturer. Once I had given unpardonable offence by stating, to a tobacconist, the quality of honey bought by one of his competitors. It has been stated that the saccharine contents of pure honey are almost the same as those of pure cane-sugar, but that the sweetening power of the former goes further than that of the latter. If correct, a manufacturer can easily find the proportion required for his special business.

During my experience, we had a season, every year, when one manufacturer or another, or one class of manufacturers or another, would buy large lots of honey for 4 to 8 months steadily, when their orders would be curtailed for awhile, or cease entirely, until their season would commence again. I can satisfy the curiosity of Mr. Brown only so far as to state the quantities sold, and to whom.

Our best customer among tobacconists was one to whom we shipped, for years, 3 barrels of honey (1,500 1,800 pounds) every other day; the next best one received 5 to 6 barrels a week.

Among bakers, our best customers received 5 to 10 barrels a week, and one of them a carload every fifth or sixth week.

A fruit-canner buys a few barrels of honey every fall for making pickles. A few pork packers and a few brewers buy occasionally 25 to 50 barrels of honey. If barley should ever again bring \$1.50 a bushel, brewers would buy the bulk of the honey crop of America and Cuba. Pork men having used honey, acknowledged, in every instance, the superior quality of their meat. But I cannot account for the reason why honey is not in more general use among them.

One of our most important customers,

for many years, was a printer's roller manufacturer. Important, because the qualities he used went begging for buyers among all others. Honey-dew, buckwheat and other dark qualities were his preferences, because cheapest. One time, when we were out of cheap honey, I had sent him fine basswood honey at cost price, in order to hold his custom. He pronounced it adulterated, in spite of all my protestations. Offensive language followed, and the loss of a customer was the result. Having found other buyers for the same qualities, we have consoled ourselves.

Honey-vinegar is, perhaps, the best of all vinegars, but owing to the cheapness of the common article, its manufacture is principally confined as yet to bee-keepers. We use about a pound of honey to a gallon of water (40 pounds of honey for a whiskey-barrel), employing the natural process, the same as for cider-vinegar, exposing it to warmth and air.

CHAS. F. MUTH.

STRAY STINGS *From— The Stinger.*

Said Mr. Drone to pretty Miss Bee :
"Long have I had my eye on thee ;
And if thou wilt be mine indeed—
To get my drink and also feed—
I'll live for thee, or for thee die."
Miss Bee just said—"Not I! Not I!"

There are some people who would sneer at the industry of the bee, because it doesn't furnish them with bread to spread the honey on.—*Selected.*

Golden drops of honey are as sacred in this country this year as golden dollars are. Perhaps the English "gold bugs" have prevailed on the "bugs" of the apiary to join with them in lessening the supply of gold in America. Who knows?

What a pity it was that an Apicultural Congress of the World was not arranged for, that it might meet about the time of the great North American convention of bee-keepers. As it is too late to have such a congress this year, The Stinger now moves that such a convention be held in San Francisco on Washington's Birthday, next year, when the International Midwinter Fair is in full blast in that city. Who will second the motion?

Speaking of such a congress, reminds me that there is no better time or place

for holding this meeting than in the city and on the date named. Reduced fares will be offered to California at that season; many Europeans come over to California during the winter and early spring. It is a time when our bee-keepers can better spare the time away from home than at any other period. California is a Mecca that the majority of mankind have a desire to see, and February and March are as good months to see it in as any time of the year, provided the sight-seer does not wish to see it when the hills and dales are one mass of flowers, as they are toward the close of April, and in the month of May.

Mrs. Atchley advertises in a late number of the AMERICAN BEE JOURNAL for a sample of foul brood which she wishes sent to a certain Doctor in Texas, who is to make a microscopical examination of it for her. The trouble is, she only asks for a wee little bit; I am sure there are dozens of bee-keepers in this country to-day who would gladly send all they have, if they thought by so doing they could get rid of the plagued disease for ever.

I notice that the editor reports that some honey has been produced by Doolittle's bees that are on exhibition at the World's Fair. Now, if bee-keeper Doolittle could only get a couple of tons of honey from those bees, and sell the product at the rate usually demanded for commodities on the Fair grounds, what a fortune he would have! Just think of it, ye bee-keepers who have been getting no honey these long years past!

Talking about "experiment stations," reminds me that every man becomes such a station when he gets a sting under his nose. I will bet a pin against a last year's bird-nest, that such a fellow will try everything that he can lay his hands on, in the hope that he will find in it a remedy to allay the pain the sting is causing him. Have you ever been there, my friend?

"I know why bees never sit down," said Walter.

"Why, my dear?" asked his mother.

"Cause they has pins in their coat-tails, and they's afraid to."—*Selected.*

A BINDER for holding a year's numbers of the BEE JOURNAL we mail for only 50 cents; or clubbed with the JOURNAL for \$1.40.



CONDUCTED BY

Mrs. Jennie Atchley,
BEEVILLE, TEXAS.

Worker, Drone, and Queen Origin.

MRS. ATCHLEY:—Does the shape of the cell and the food of the larva make one a worker, one a drone, and another a queen?

P. G. CARTER.

Friend Carter, the size and shape of the cell together with more food causes a worker larva to develop into a full-developed mother, or gives the bee the power to become mated and take up the duty of egg-laying; while the workers being confined in a smaller cell, and only has food to barely put her through, causes her to be more compact in build, and hardy, and capable of doing a great deal of flying, but cannot become a mother of females, though she may lay at times when the hive is hopelessly queenless, but drones always result.

All eggs laid for worker-bees, or that will produce worker-bees, would or could be turned into queens if they were placed in queen-cell cups, and cared for by the bees; but an egg laid for a drone will make nothing but a drone, no difference where reared, or what kind of food is used, or how much, in his production. A drone is a male, and has no part of a female in his make-up. Therefore, he can never be anything but a drone.

JENNIE ATCHLEY.

Working Two or More Queens in One Hive, Etc.

I see on page 705 of *Gleanings* for Sept. 15, 1893, that Mr. B. Taylor, of Minnesota, claims to be the originator of keeping two or more queens in a single hive. Now, Mr. Taylor will please take no offense, when I tell him that we have done this thing for more than ten years, or a long time, at least; and if I am not mistaken, I published it in 1884,

and have since become so used to it that we think it only a common thing down here in Texas.

This year, Willie has reared queens on the Doolittle plan, by placing queen-excluding division-boards in a long or wide hive, and when I scolded him for fooling with such hives, he assured me that it was one of the best plans to rear queens, as he has four departments and two laying queens in the same hive all the time. He moves the frames containing queens and brood first to each of the two outside boxes or partitions of the one box, rears a batch of cells in the middle two, then turns the queens into the middle ones, and starts cells in the two outside ones, and so on. The bees all mix and work together as one colony, and of course the queens are accepted anywhere in the hive.

We also work hives every year with two laying queens together in the same hive, and this year we sent to Mr. A. I. Root four laying queens (vigorous young ones) in one cage, and two died or were killed, or perhaps died as do workers in shipment. Mr. Root mailed them back just as received, and the two queens arrived back to Texas all right, and occupied the same hive until we prepared them to move, and as they had too many bees together to move successfully in hot weather, we made a division, and now they have a colony each.

Now, I would just like to save Mr. Taylor's next year's work, as he says he will demonstrate by another season's labors whether he is successful in discovering a non-swarming method. I can tell him right now, that it will never do in this country, for we have tried it.

Now, I believe when the seasons, etc., are right, bees will swarm because God said so, and I believe Him. Mr. Taylor will please not think that I have jumped up as a critic, for such is not the case. I tried his plans years ago, and the bees swarmed, both old queens coming out with the swarm, and have been hived together and worked together, and large yields have been the result; and while I nearly discovered this alone, I will tell where I caught the idea. If you remember, some years ago, Chas. Dadant reported that he had by mistake left two queens in a hive all winter, by forgetting one that he had placed in the hive caged, and the next spring he found both queens alive and O. K., but the caged one was still in the cage. But from this I caught the idea of two queens in a hive.

Now, as Mr. Taylor gave a warning note at the close of his article in *Glean-*

ings, I thought best to mention this matter now, to show him how far he was behind, and that he might not lose next summer's work, as we class such bee-keeping down here as only common things.

SECTIONAL BROOD-CHAMBERS.

Now, a long time ago, when I was not writing any for the bee-papers, I used a sectional brood-chamber four inches deep, or frames $4\frac{1}{4}$ -inches in depth inside, that held just one tier of sections. I have some of the old frames now, and some years after I had thrown them away, here came along Mr. Heddon, of Michigan, and patents the very same thing, and sells it all over the country, and the people are mostly, I believe, now doing what I did—throwing them away. Well, as I was not writing any, I just let the matter pass without saying one word about it; but as Mr. Taylor sounded his warning note, I blow my horn to his warning, and say that if he wishes priority in this thing, he must go back of 1884, and I will willingly hand over my "checks." I write this in all love and candor. JENNIE ATCHLEY.



What About Improving Utensils in Bee-Keeping?

Query 892.—1. Along what line do you think there is most need for improvement in utensils used in bee-keeping? 2. Or are the most important aparian fixtures good enough? As one interested in inventing new things or improving old ones, I ask the foregoing questions.—Inventor.

We are pretty well off now.—A. J. COOK.

I think the more important fixtures are good enough.—MRS. L. HARRISON.

About all of our utensils are "good enough" to be improved.—P.H. ELWOOD.

There are too many inventors in bee-culture, and too many inventions which are more injurious than useful.—DADANT & SON.

1. Along all the lines. 2. Nothing is good enough if we can get *anything better*.—H. D. CUTTING.

1. In the line of the wooden appliances, as hives, crates, etc. 2. No, they are not.—J. H. LARRABEE.

Non-swarming hives, and controlling the mating of queens as practically as in the mating of other stock.—G. M. DOOLITTLE.

Improve the extractor. Invent some way to fertilize the queens with selected drones. More things could be added, but that is enough for one year.—E. FRANCE.

1. Along the line of simplicity. To get rid of moth-traps, self-hivers and other traps equally as useless to the average bee-keeper. 2. Yes.—EMERSON T. ABBOTT.

Simplify present utensils so as to have fewer frail pieces. A number of little, frail pieces to each hive is certainly annoying. A better-shaped queen-cell protector.—MRS. J. N. HEATER.

I would not know where to begin to make improvements in aparian fixtures. Somebody may be able, sometime, to make some improvements, but it seems to me that what we have are about good enough.—M. MAHIN.

1. All along the line. 2. Nothing is good enough as long as it can be improved. Tackle that which you think needs improving the most, and of which you have some clear ideas for betterment.—C. H. DIBBERN.

Possibly no one great thing shows its need, but here and there little things that, put together, make an important whole. For instance, a tool to readily and easily take out the dummy from a dovetail hive.—C. C. MILLER.

Along the line of aparianists. All we need to-day to make the bees of the world pay better is *good aparianists*. The tools and fixtures of the present, as a rule, are far in advance of the manipulators.—MRS. JENNIE ATCHLEY.

The field of aparian invention is pretty well filled. There might be still room for fixtures and modes of manipulation for prevention of swarming, and for automatic hivers, etc., also controlling fertilization.—J. P. H. BROWN.

There is probably no such thing as *stand-still* in the field of improvement. Probably we must either go forward or go back. One thing should be taken into consideration by those interested in invention along this "bee-line"—the time has arrived when *bee-men* are quick

to detect the practical from the impractical, and it will be useless in the future to attempt to introduce impractical implements. This space is too straightened to give room for suggestions.—G. W. DEMAREE.

1. Well, I should think in the line of hivers and non-swarmers, if any one wants to use them. 2. Most other utensils are good enough until we can get something better, and no one can tell whether they can be improved so well as a born inventor.—R. L. TAYLOR.

If I knew just what was needed, I would go to work to supply it myself. However, we need better honey and wax extractors, smokers, foundation fasteners, bee-veils, automatic swarmers, etc. I know of nothing that is perfect, or "good enough."—JAMES A. GREEN.

Try your hand at hive-covers. I have not seen the one that suits me yet; and also please hunt us up a little better and more convenient veil than we now have. Extractors, honey-hives and smokers, are pretty good, but there is room for some improvement yet.—S. I. FREEBORN.

There is room for considerable improvement in nearly all our fixtures. I, for one, am interested in the self-hiving problem, and think it will yet be a success, when the right inventor takes hold of it. Then, how about our "bee-escapes?" They are fairly a success; but—!—WILL M. BARNUM.

Much depends. I find that the utensils now in common use are good enough for me. Invention in this line is about played out, so far as practical beneficial results are concerned. Improve what we now have, should be the rule, rather than to attempt to create an "era" by getting up new ones.—J. E. POND.

We need a smoker that never goes out unless put out. We need an uncapping-machine run by steam or foot-power, that will do good work on a crooked comb. We need a non-swearer that doesn't swarm. Or an automatic swarm-catcher that will work whether a fellow is watching it or not.—EUGENE SECOR.

Capon and Caponizing, by Edward Warren Sawyer, M. D., Fanny Field, and others. It shows in clear language and illustrations all about caponizing fowls; and thus how to make the most money in poultry-raising. Every poultry-keeper should have it. Price, postpaid, 30 cents; or clubbed with BEE JOURNAL one year, for \$1.10.



Selling Extracted Honey — Several Ways of Doing It.

Written for the American Bee Journal
BY G. M. DOOLITTLE.

I am asked by a subscriber to the AMERICAN BEE JOURNAL, to give my plans of selling extracted honey.

First, we have our home trade, which is of two-fold nature—that which comes to the door, bringing pails, etc., and taking away the number of pounds called for. If this were only large enough to take all that could be produced, the bee-keeper might be perfectly happy when thinking along the line of disposing of his product; but as this is not often the case, we next take a sample and go around among our more distant neighbors, leaving a sauce-dish full at every house, and informing them that we shall be around in a couple of days or so with the same kind of honey for sale, giving the price that will be asked for it.

Where the crop is not large, the whole can be disposed of in the above two ways, especially if we feel disposed to trade our honey for butter, eggs, wheat, oats, etc., which can be used in our families, or readily converted into cash. I find people much more ready to exchange their products for honey than they are to pay cash for it. Even the man who works for me is much more ready to exchange his day's work for honey than he is to pay me the price of a day's work in money. There seems to be a certain desire, with most people, to keep money after it is once obtained, which is so strong that they will often go without that which costs money, while an exchange can be readily accomplished with no money in view.

Second, we have our "store trade," by which I mean the leaving of honey in glass fruit-jars, honey-tumblers, and the different pails suitable for retail purposes, at the stores in our vicinity, to be sold on commission, or to pay for the

goods we purchase. Here we find the exchange mania coming in again; for the store-keeper will often give a good bargain by way of trading something we want, for our honey, while we could get him to take but very little, if any, if we demanded cash for it. I cannot see the least impropriety in trading honey for boots, shoes, calico, hats, caps, or anything we must buy: for in this way we find an outlet for our product, and purchase what we must have. By carefully looking after this store trade, and being affable and pleasant, much honey can be disposed of.

Third, we have the shipping of honey to different villages and cities, to be sold on commission or for cash. As nearly all are familiar with the way this is usually done, I shall not dwell on these, but tell of a plan I have been quite successful with as far as tried. Not producing much extracted honey of late, owing to being in the queen business, I have not tested it as thoroughly as I would like to have done, but, as I said before, it has been a success so far as I have used it. It is as follows:

During my leisure days I get out boxes of white basswood or whitewood lumber, to hold a given number of pounds, the sizes usually being 5, 10, 25 and 50 pounds, basing the size of the box on the fact that 20 cubic inches will hold one pound of honey, and give a little margin to spare, so that a box containing 200 cubic inches will hold 10 pounds of well ripened honey, and leave about $\frac{1}{4}$ inch at the top unfilled.

The material for the boxes, after being gotten out, is piled up in the loft of the shop, and left till the next September before making up, when it is thoroughly kiln-dried through the excessive heat which pervades this place during the summer months. As soon as the honey begins to candy in the storage cans, this lumber is gotten down, and the desired number of boxes made. When made, the inside of the joints is coated with paraffine or beeswax, and the desired number of pounds of the partially granulated honey run in. Over the top a sheet of manilla paper is now laid, and the cover laid on top of this, when the whole is set away till candied or granulated solid, when it is ready for shipping.

Along from November to February, according to prices and my wants, I take a block of wood of suitable size and bore a hole in it, into which I put a chunk of about two ounces of this now solid honey, and a slip of paper containing printed directions how to liquefy the

honey, when a little piece of section is nailed over the open end. The block of honey is then nicely wrapped up, and a tag tied on.

I then take down my gazetteer, which gives the population of every town and city in the United States, and pick out the place, or places, where I think such honey as I have will sell the best, according to population, location and manufacturing interests, when I mail the postmaster of the place I have selected, one of the little blocks, and write to him, sending terms, etc., asking him to interest himself in the matter by showing this sample to those he thinks would wish honey, as they come after their mail, giving him a certain commission on whatever he can sell.

As orders come in, take the boxes of honey, and after inspecting to see that all is right, drop on top of the honey the slip telling how to liquefy it, etc.; then put on the manilla paper as before, and nail on the cover, trimming off the paper left on the outside, with a sharp knife. The paper is put on to make this upper joint dust and dirt tight. All that is necessary to be done now is to direct and ship.

Without going into farther details, I think all can understand that here is a plan that is not only cheap as a package, method of working, etc., but brings our product to the consumer with as little middlemen agency as possible, when a market away from home has to be sought.

Borodino, N. Y.

Orange Co., Calif.—Wonderful Climate and Productions.

Written for the American Bee Journal
BY DR. E. GALLUP.

Now, Mr. Editor, as you have got me into trouble, please publish the following as answers to inquiries. I will endeavor to be as brief as possible.

I have been asked, Do you have good public schools? Do you have any churches? Do you have much sickness? What is the prevailing disease? etc.

Santa Ana has a population of about 4,500. The average daily attendance in the schools is 674 pupils. The number of teachers is 20, and their salaries are \$1,600 each. The number of school houses is 4—two in the central, and one each in the east and the west end of town; besides one large hired hall and a business college. Our teachers are of

the very highest grade. We have 8 or 9 churches, besides 3 hired halls. There are 17 churches within a circuit of 3 miles; also Masonic, Odd Fellows, and all other secret organizations, public library, etc.

The prevailing diseases are mostly chronic and consumptives that come here for their health from the East. The largest percentage of deaths are from consumptives that come here too late to be benefited; still, many recover and live. The prevailing disease among children is *perfect health*. Why? Because they actually can live out-doors the entire year. They have ripe fruit, either from the tree or vine the entire year, and an abundance of it. Fresh vegetables are delivered at our doors the entire year.

Children are almost without an exception perfect specimens of physical health and vigor. My little Maggie, 2½ years old, was born of a consumptive mother, who was in the last stages, contracted in Indiana, and also inherited, as her mother, two sisters and an only brother all died with the dread disease. Well, Maggie is now as perfect a specimen of health as ever was seen. She is up at 5 o'clock, and out-doors with her papa, bare-headed and bare-footed, in her night-dress, helping to feed the chickens (for her papa is a thoroughbred chicken crank). She has her pet rabbit and pet pigeon to feed.

The outside doors and windows of our house are all open night and day, with screen doors and windows to keep out flies. We use Chinese matting—no costly carpets—so we are not afraid to let in sunshine and air.

Little Maggie is on her feet about 15 hours out of every 24, for she scarcely ever takes the time to take a daylight nap. I dress her as soon as I get in from my morning chores, then light the fire and get breakfast. As soon as she is dressed she is out-doors and on the run with her two little brothers.

When she was born she weighed 7½ pounds; and when 9 months old she weighed 9 pounds. Her mother being a helpless invalid, I had sole care of the little thing almost from birth. I took her to town with me, or wherever I went. She slept out-doors under the shade of an evergreen tree in her little carriage, and took in the climate, all she could breathe. Almost every one that saw her, said to me, "You don't expect to raise that child, do you?" My reply was, "God has given her to me on purpose to raise."

What is the price of land? Under-

stand that you can support a good-sized family here on 5 or 10 acres of land; so we charge you for the climate and throw in the land. But you can get just as much climate on a lot 50 by 150 feet as you can on 10 acres. Climate can be had from \$50 to \$1,000 per acre, according to location, adaptability, etc. A full bearing orange orchard costs from \$500 to \$1,000 per acre, but the gross receipts frequently amount to the above sum per acre.

Don't ask me what we can raise here, for the list is too long. I can tell you better what we do not raise. We don't raise our own cotton, but could. We don't raise our own bananas, but could. We don't raise our tea, coffee, rice, etc., but we are going to raise our own sugar. We raise all kinds of fruits, nuts, vegetables, grain, butter, pork, poultry, beef, mutton, wool, etc.

Our mean temperature is about 75°. Our climate is not debilitating, the nights are always cool—it is always cool in the shade, always warm in the sunshine. We have from 3 to 5 or 6 rainy days in the entire year. It is called "God's country" by us Californians; an old man's paradise, etc.

Santa Ana., Calif., Sept. 22, 1893.

[Well, Doctor, when we read the first sentence of your interesting article, we were almost tempted to feel sorry for getting you into "trouble," but after reading all you have to say in the foregoing, we were really glad that we published the former things about you and your glorious part of California. What an Eden you must be in! Why, it makes us feel just like taking the next train for your country, especially when we remember that it was 20° below zero here last winter. But we will have to be contented, and continue "to labor and to wait." Perhaps some day we may be permitted to go to your heavenly place—

"Where everlasting spring abides,
And never withering flowers."—ED.]

Honey as Food and Medicine is just the thing so help sell honey, as it shows the various ways in which honey may be used as a food and as a medicine. Try 100 copies of it, and see what good "salesmen" they are. See the third page of this number of the BEE JOURNAL for description and prices.

Indications of the Honey Market—Some Experiences.

Written for the American Bee Journal

BY C. W. DAYTON.

I believe if bee-keeping is worth dabbling with at all, it is worthy of our undivided attention. If after producing a crop of honey a man has not the time, interest or love for the pursuit, to load his honey into a wagon and sell it to those that would consume it, he is not the man to find out what consumers want, but he is the man who would shut both eyes just before the time to pull the trigger.

Like the persimmons once described in *Gleanings*, which look ripe and luscious while they are yet green, and not until they appear stale and rotten are they eatable, so is honey not at its best until it has remained in the hives long enough to become travel-stained.

In Denver, as I was filling a lunch basket for a journey in the mountains, I stepped into a grocery for a section of honey where several grades occupied one show-case. The first section the grocer took up was much travel-stained, and he said, "You don't want that one;" and he took up another unstained one. I inquired what was the fault with the first one.

"Oh," he said, "the bees have worked and fussed with it until they have spoiled it." Said I, "I think the longer bees work with honey the better it becomes, and I would rather have that section than any other one in the case."

"Yes," he answered, "I presume the honey is best, but our trade demands the lightest colored combs."

On leaving the store I added, "I have often noticed the same of those who come for honey, and have wondered why they do not prefer butter to be white instead of yellow, as well."

On the opposite page from the foregoing reference to *Gleanings*, it says: "We, as bee-keepers, may know better than any others what honey is, and which is the best, but unless we supply the consumer we cannot tell how to grade or classify it to suit the trade.....but the man who is a dealer knows it in exact proportion to his experience.....The meaning of the terms of trade, 'fancy,' 'choice,' etc., may be different from what we understand them to be, and the taste of the public may be different from ours. It is the commission man who understands these things best."

Very truly, the dealer "understands"

exactly "in proportion to his experience," but he sadly lacks experience, both fore and aft, and the intervening space is so limited there is scarcely room for the terms "fancy," "choice," etc. If these terms were changed into Latin, they would serve him still better.

It only requires one or two short lessons to teach a man that persimmons should look spoiled before they are fit to eat, because it is not pleasant to have one's mouth and throat so puckered up that he cannot swallow what his mouth contains, or, if he attempts its ejection, it will find its way into his shirt bosom.

In the case of honey there is no trouble. Ripe honey is relished more and more as it is eaten and the appetite for the flavor increases. When the honey is unripe, or the flavor impaired, it is still palatable, and can easily be swallowed, but the wishes for more mouthfuls become less and less imperceptibly. After awhile it is not brought from the pantry at all. Finally, to make room for other things, it is doomed to a shelf in the cellar, and when the honey-man comes around next year they tell him, "We don't any of us like honey, and have a quantity on hand which was obtained last year."

One taste is deceptive. Except by eating of honey for several meals is the flavor found to be tiresome. No dealer tests it in that way.

The flavor of persimmons, or any other fruit, is better or worse, as Nature decides to make it, and cannot easily be altered by man, just as there is more or less water in the nectar the bees find in the flowers; but the removal of honey from the hives before the water is expelled, is an artificial proceeding within the easy control of the bee-keeper. The bee-keeper not only has taste as well as the dealer, but may consider how and when it was taken from the care of the bees, where stored, etc.

In the fall of 1886, I took a load of 700 pounds of extracted and 300 pounds of comb honey to sell in Hampton, Franklin county, Iowa. The market was bare of all honey except a small quantity in the comb. After a canvass of the seven or eight groceries, it was found that 250 pounds of comb and six one-pound jars of extracted abundantly supplied the dealers.

At last a groceryman, to whom I was trying to sell more of the extracted, broke out, "What do you 'raise' that stuff for, any way?" "For the money it brings," was the reply.

"Well, you can't sell any of it in this town. Nobody wants it at any price."

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You'll have to haul it home again." Such information might be discouraging when I had come with the intention of finding sale for a wagon load.

About 9 o'clock I had finished with the dealers, and hitched my horses to one of the liveliest business corners. In about five minutes a farmer came along and asked what was on my wagon, if it was for sale, etc., and from this time I was constantly busy with weighing and making change, so that before sundown I started for home with every keg and can empty. In this instance, the dealers "knew in exact proportion to their experience."

The day I arrived in Los Angeles, I went into a commission house where a bee-keeper was disposing of eight cans of extracted honey, and they were testing it by licking their lead pencils after dipping them in the screw-caps. Three cans contained very thin honey, and in five it was very thick. When the merchant inquired the reason for this difference, the bee-keeper said he could not tell, as they were extracted right along day after day alike.

"Well," says the merchant, "I guess the thin is just as good honey," and he took them all at one price. There were also several crates of sections which, being much travel-stained and covered with propolis, the merchant glanced at and said he did not want even at the low price of 7 cents a pound. This bee-keeper had 150 colonies of bees, had been in the business several years, but this season his orchard came into bearing, and the bees were neglected. I wished to ask if he had any green grapes or decayed peaches to sell.

Did the reader never extract honey one day when it would pile up as it ran from the extractor, and the next day it splashed like water? Furthermore, there are whole honey seasons of such honey. In 1889 I knew colonies to gather from basswood 60 to 70 pounds by actual weight in seven days, and when it was evaporated to the consistency of ripe honey, there was not enough for their winter stores.

At Longmont, Colo., about the middle of the honey harvest, I inquired at a leading grocery for new honey, and was handed a pail containing a piece of comb honey which was granulated solid, and which was surrounded by new extracted honey. On examination, I remarked that the liquid was new, but the comb in it had been broken from a section left over from last year. At this he grew vehement, and offered to bet \$20 that all of it was new.

When I told him that it was too early in the season for honey to be sealed, and explained the nature of granulation, and said I would sooner bet my "whole pile" than anything less, he concluded that I knew what I was talking about. Then I went out on the street and a laborer told me he had once obtained some real honey, but of late he thought that bee-keepers stirred sugar into it!

I suppose the producer of this painful thought that if he hastened it upon the market before other bee-keepers brought their ripe new honey, it would be as forced to sell as the people were crowded off the Brooklyn bridge. In the language of Rambler, such honey occupies the whole railroad, side-tracks and all; and as to moving, there is a smash-up ahead with the wrecking crew on a strike.

Pasadena, Calif.

(Concluded next week.)

How to Protect Colonies of Bees from Ants.

Written for the American Bee Journal

BY E. S. LOVESY.

Many good points have been brought out through the agitation of this ant question. They have come as a new enemy or pest to the bee-keepers in some localities within the last two or three years, hence some of our bee-keepers lost many of their bees before they awoke to the fact that the ants were injuring their bees.

Out of about 200 bee-keepers that I have visited this summer, I have found those ants in from 20 to 25 places, and in a few places they were very troublesome. I visited one man three times, and not until the ants had destroyed more than half of his bees, could I convince him of the havoc that they were making; but he is now keeping them off as I have, and he says that the bees are getting along all right.

While I have not been able to find anything yet that will exterminate them entirely, I have been successful in keeping them off of the hives by making stands to set the hives on. If the ground is nearly level, I cut six posts about a foot long, with three cross pieces and two long scantling for each stand. Then I paint a 2-inch ring around each post. I first used tar, but it dries too quickly. Now, after many experiments, after putting on two or three coats of tar to form a body, I use a mixture of about 3/10 of lard, 3/10 axle grease, 3/10

tar, and a little over 1/10 white lead. The ants won't go over this. It will keep off a million as easy as one. After it has had two or three coats it will keep them off five or six weeks, sometimes, without renewing. If it is very hot, and there is little or no shade, add a little more tar and white lead.

Since I have used this mixture, I have not lost any bees by ants, except once in awhile one that they may catch on the ground. If they once get hold of a bee, they never let go while there is any life left in the bee. I have seen bees spin around like a top when the ants take hold of them. You would hardly believe the speed at which they turn unless you saw them.

We have a few red ants, also some large flying ants, but it is those little black pests that are a terror to our bees. One kind is less than $\frac{1}{8}$ of an inch long, the other is about $\frac{3}{16}$.

I have heard that some one wrote in one of our bee-papers some time ago, that the ants did not injure the bees, because the bees carried them off. This is a mistake. While it is true that the bee often flies off with the ant, the journey ends with the death of the bee, while the insignificant little villain that gets a free ride is ready for action wherever he may land. Some people think that the bees have a tendency to spread the ants in this way. One thing is certain, when they once get started in a hive, they soon clean out the bees, if they are left alone; and then they have a picnic carrying off the honey. Of course, each ant carries but a small load, but they usually get force enough to make short work of it.

While I still have millions of ants that I would like to dispose of at any price, I do not think that I have over 1/10 as many as I had last year. I have tried a great many things that I have heard of, or seen in print, such as poisoning, etc. I have caught a great many with honey and water. The flies also like it, and crowd in the pail, but the ants being of a greedy and pugnacious nature, as they run around the pail or tin bucket as they come in contact with the flies, they never miss a chance to make a dash at it. They miss the fly and their hold at the same time, and so fall in. I have caught a solid $\frac{3}{4}$ -inch deep of ants this way, also many yellow jackets and moths.

There has been a great deal of complaint this year, by some of our bee-keepers, of the destruction caused by the yellow jackets or wasps, and also of the moth; neither of those pests can do

much harm if all the colonies of bees are strong, especially if the entrance to the hive is closed up to about $\frac{1}{4}$ of an inch.

I had a weak colony the first of August that were attacked by the yellow jackets. I saw that they were getting the best of the fight. When I examined the bees I found they had a laying worker, but no queen. I shook them into another hive, then the yellow jackets tried their best to get into the other hives, but without success. The few that did succeed in getting in were soon killed and carried out again.

But to return to the ants: I have had the best results with boiling water and burning with coal-oil. Slaked lime and coal ashes are good to spread around to keep the ants away from the vicinity of the hives.

While we have some ants here in Utah, our Friend Dayton, of California, (see page 112) "knocks us out" entirely, both for size and quantity. We gracefully surrender our claim, and wish Mr. Dayton success in his efforts to exterminate them.

Salt Lake City, Utah.

CONVENTION DIRECTORY.

Time and place of meeting.

1893.	
Oct. 18-20.—Missouri, at Perte Springs, Mo.	P. Baldwin, Sec., Independence, Mo.
Dec. 12, 13.—Illinois State, at Springfield, Ills.	Jas. A. Stone, Sec., Bradfordton, Ills.
Dec. 19, 20.—Northern Illinois, at Rockford, Ill.	B. Kennedy, Sec., New Milford, Ill.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—Dr. C. C. Miller....	Marengo, Ills.
VICE-PRES.—J. E. Crane.....	Middlebury, Vt.
SECRETARY—Frank Benton, Washington, D.C.	
TREASURER—George W. York...Chicago, Ills.	

National Bee-Keepers' Union.

PRESIDENT—Hon. R. L. Taylor...	Lapeer, Mich.
GEN'L MANAGER—T. G. Newman, Chicago, Ill.	147 South Western Avenue.

Well Pleased.—I am well pleased with the BEE JOURNAL, and do not see how any beginner could get along with bees without it.—J. T. BROWN, Sumas, Wash.



Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

"Better Late than Never."

October 1st was the best honey-day of the season; gathered from asters. The day was warm and moist, and bees dropped at the entrance like shot.

MRS. L. HARRISON.

Peoria, Ills., Oct. 3, 1893.

Bees Did Fairly Well.

Bees have done fairly well this season, considering the drouth. We had no rain from the first of July to Sept. 20th, when we got nearly 2 inches by the rain-gauge.

JESSE BRADY.

Little Rock, Ark., Sept. 23, 1893.

Indian Apiarian Names.

Here are two more names of the honey-bee, showing that the old Indians had some correct ideas about it:

The Algonquin tribe call the honey-bee, *amo*; the honey, *amo-sinzipakwoot* (bee-sugar); the wax, *amo-pimite* (bee-grease); the hive, *amo-asason* (bee-nest); and the working - bees, *amonask - sanzipakweatokedjik* (minor bees making sugar).

The Iroquois Indians call the honey-bee, *Tsinakontakwane*; the honey, *Tsinakontakvane-otsiketa* (bee-sugar). That's all I know about the Iroquois.

MONTRÉAL SUBSCRIBER.

Montreal, Canada.

The Original Bean-Honey Man.

I saw an item in the BEE JOURNAL about Lima bean honey, and I suppose I am the man who first put such honey on the market. Last year I sold several tons, and this year also. I find ready sale for it, and it is no humbug. I have some of it in Chicago, at the World's Fair—perhaps you have seen it, and also my bee-hive. I have been in the bee-business for over 30 years. I have sold all of my honey off except some samples, and it seems that none of the bee-men in Southern California sent any honey to the Fair but myself. If they all would have turned out as I have, we would not have been behind other States.

J. ARCHER.

New Jerusalem, Calif., Sept. 20, 1893.

Never Lost Any in Wintering.

I notice a great deal in the BEE JOURNAL about wintering bees. I commenced handling bees four years ago, starting with one colony, increasing slowly, and last winter I had 8 colonies. It was about the coldest winter ever known in the valley of Virginia, the mercury below zero for days at a time, and ice formed 12 to 18 inches thick on the ponds and streams. My bees came through in fine condition, and have averaged, so far, 40 pounds of comb honey to the colony, with fine prospects for a good fall crop. I always leave them on the summer stands, with no protection. I use no cloths or cushions; but leave the supers on. In the spring I remove the supers, shut the bees below with oil-cloth, until time to put the sections on. In my four years' experience I have never lost a colony.

F. T. BROOKE.

Brookewood, Va., Sept. 9, 1893.

Good Year and Bees Did Well.

This has been a good year for us, and the bees did well. The honey was nearly all No. 1 or fancy. We have over 50 colonies, but kept no account of the honey secured, for it sold nearly as fast as taken from the hives to the local trade, at 12½ cents per one-pound sections.

We like the BEE JOURNAL very much, and think that every bee-keeper should have it.

MRS. L. M. SMITH.

Canandaigua, N. Y., Sept. 25, 1893.

White Clover the Finest in Years.

We can't keep house without the AMERICAN BEE JOURNAL, although as yet we have not found bee-keeping very profitable. The severe winter killed most of the bees around here, mine with the others. The white clover here was the finest we have had in a number of years, and but few bees to harvest the honey. A long-continued drouth has spoiled the fall crop. The late swarms here will have to be fed, and fed enough to carry them through the winter.

ALPHA BARRETTE.

Prairie du Chien, Wis., Sept. 15, 1893.

Small Crop—Experience with Queens.

I said that I would report as to our honey-flow for 1893. It is short, averaging about 18 pounds of comb honey per colony. On page 151, Mr. J. W. Clark, of Clarksburg, Mo., writing on July 20th, says that he has taken no honey, and that there is none on the market. There is also none on the market in this place. Bees in this locality have done very little swarming this year; out of 10 colonies we had one swarm. Last year we had 5 swarms out of 7 colonies.

Now something about queens: I sent for an Italian queen on June 4th, and got her after some four weeks waiting. When she came, I took her to a colony to introduce. I took off the paper cover and the tin slip

from the end of the cage, laid the cage wire-cloth down on the frames, and closed the hive. In a few days after that I went to see if she was all right. On opening the hive I found that she was liberated. I tried to find her on the frames, but could not. I looked in the bottom of the hive, and there I found her dead. Resolving, however, to try again, I sent for another queen, and received her in a few days. This time I was very careful. Taking five frames of hatching brood from the other hives, I put the queen and the 6 or 7 bees that were in the cage with her, on the brood; the brood hatching all the time, by night there was a nice cluster of young bees. I kept them in the house a few days until it was a nice little colony, then I put them out in the apiary with the entrance only a little ways open, to keep robbers out. The queen commenced laying in a few days afterward. The queen is a very nice yellow one, and her bees are also very yellow. I have reared one queen from her, and she proves to be very nice.

FRANK N. BLANK.
Prairie Home, Mo., Sept. 13, 1893.

Convention Notices.

ILLINOIS.—The annual meeting of the Northern Illinois Bee-Keepers' Association will be held in the Supervisor's Room of the Court House, in Rockford, Ills., on December 19 and 20, 1893. A good programme is being prepared and all are cordially invited.

New Milford, Ills. B. KENNEDY, Sec.

MISSOURI.—The 8th semi-annual convention of the Missouri State Bee-Keepers' Association will be held at Perte Springs (near Warrensburg) Mo., on Oct. 18, 19 and 20, 1893. It is desirable that as many as can possibly make arrangements will be present, in order that the prosperity of the Association shall not suffer in these poor seasons, for want of personal support. The Executive Committee will prepare a program that will give all an opportunity of expressing themselves on the most important subjects now occupying the attention of the bee-keepers of the country. Arrangements have been made with the M. P. Ry. Co., for 1½ fare, certificate plan. Accommodations at the Perte Springs Hotel will be reasonable. Bee-keepers from any State and every State will be cordially welcomed.

P. BALDWIN, Sec.
Independence, Mo.

"A Modern Bee-Farm and Its Economic Management," is the title of a splendid book on practical bee-culture, by Mr. S. Simmins, of England. It is 5¾x8½ inches in size, and contains 270 pages, nicely illustrated, and bound in cloth. It shows "how bees may be cultivated as a means of livelihood; as a health-giving pursuit; and as a source of recreation to the busy man." It also illustrates how profits may be "made certain by growing crops yielding the most honey, having also other uses; and by judgment in breeding a good working strain of bees." Prize, post-paid, from this office, \$1.00; or clubbed with the BEE JOURNAL for one year, for \$1.70.

Honey & Beeswax Market Quotations.

Rules for Grading.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at its last meeting, and, so far as possible, quotations are made according to these rules:

FANCY.—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsouled by travel-stain, or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsouled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1 dark," etc.

CHICAGO, ILL.—Comb honey is coming in plentifully—most of it fancy and No. 1 white. White extracted scarce with plenty of inquiry for same. We quote: Fancy white, 16c.; No. 1 white 15c.; fancy amber, 14c.; No. 1 amber, 14c. Extracted, 5@7c. Beeswax slow at 20c. Sept. 14, J. A. L.

CHICAGO, ILL., Sept. 15.—The receipts of comb honey have not been in excess of the demand up to this date. We have yet very little surplus. Prices remain at 15@16c. for the very best grades. Discolored combs and the darker grades generally are slow of sale at about 14c. Our sales, however, are chiefly at 15c. We consider this about the best season of the year for shipping and selling comb honey. It stands transportation better than it will when the cold weather comes, and people buy it in larger quantities than they do later in the fall. Extracted is nominal, some sales being made all the time at prices ranging from 6@7c., with some other dark goods a little lower. Beeswax salable at 22c. We would advise those having honey ready to ship, to send it forward during this month, or early next.

R. A. B. & Co.

ST. PAUL & MINNEAPOLIS, MINN., Sept. 12.—The receipts of honey are quite liberal, especially the last two weeks. A great deal of Wisconsin comb honey has arrived and is in very good condition; this is being sold at 13½@16c.; the lower price being for darker honey, which, however, does not meet with an active inquiry. California 1-lb. sections selling at 14@16c. Two or three carloads of extracted honey have recently arrived, and sold at 6@7c., there being little or no difference between white and amber as to price obtained in this market. The best season for comb honey is now coming on.

S. & A.

CINCINNATI, O., Sept. 18.—Demand is slow for extracted honey with plentiful arrivals. It brings 5@8c. Choice comb honey is in good demand at 15@16c. for best white. Arrivals are good.

Beeswax is in slow demand with large arrivals at 20@23c. a pound for good to choice yellow.

C. F. M. & S.